

REMARKS

This letter is in response to the Examiner's Office Action dated 2 June 2003. Applicants appreciate the Examiner's careful review of the specification and claims. While Applicants do not specifically acquiesce in any of the Examiner's positions, Applicants have made certain amendments and arguments that Applicants believe place the case in allowance in light of the Examiner's comments and the prior art.

After this amendment, claims 36, 38-42 and 45 are in the case.

Applicants have amended claim 36 to recite that the tile has been modified by a reduction in the amount of the softer clay components and a relative increase in the amount of harder silica components. Applicants assert that these claim amendments relate to the surface structure of the tile and are not simply process limitations. Reducing the relative amount of the softer components and increasing harder surface silica will result in a tile having substantially altered surface properties, particularly increased coefficient of friction when compared to both used tile and new tile. New claim 45 has been added which recites that the silica comprises an alumino silicate material.

The Examiner has rejected claim 36 under 35 U.S.C. § 103 with regard to the terms "softer" and "hard" component. Applicants have amended the specification to indicate that the soft component comprises clay and the hard component comprises silica, preferably alumino silicate. Applicants assert that these composition limitations render the claims definite and distinct. Support for these amendments are found in the specification that clearly indicate that the hard material is a silica, at page 2, lines 1 to 2 that clearly indicate that the softer material is a clay and at page 1, lines 21 to 22 and in the claims as filed that that clearly indicate that the harder materials is a silica and that the modification of the relative amounts of clay and silica restores the coefficient of friction to new conditions (page 53, lines 10 to 23).

The Examiner has rejected claims under 35 U.S.C. § 102. The Examiner cites Morrison, U.S. Patent No. 4,745,032 and Owens, U.S. Patent No. 5,314,554. Applicants respectfully traverse the rejection.

Applicants assert that Morrison and Owens teach new unmodified quarry tile materials having proportions of materials similar to that of the quarry tile prior to the claimed reduction in the amount of softer components of the tile. Such a prior art tile, when produced, are typically made by blending an aqueous mixture of clay and silica and then permitting the mixture to dry

either in a kiln or under the influence of the sun, removing water and resulting in a hard quarry tile structure. In such a structure, the silica is typically a particulate material imbedded into a continuous matrix comprising clay. The clay typically surrounds and supports the silica on the surface of the structure. Applicants have recited that reducing the amounts of clay modifies the resulting quarry tile surface, as a result increasing the relative amounts of silica, thus increasing the friction properties of the surface of the tile. Such a modification changes the surface of the quarry tile and reduces the amount and height of the clay structure.

This modified surface is entirely different than any of the surfaces shown in either Morrison or Owens, since neither Morrison or Owens teaches an abrasive processing the surface of the tile post manufacture. The tiles in Morrison and Owens will have unchanged surfaces, unmodified amounts of clay and a typical quarry tile surface having clay surrounding and supporting the silica particulate. Such surfaces are subject to a reduction in coefficient of friction as the tile is used in a use locus resulting from soil accumulation and surface changes due to wear.

Applicants assert that the structure resulting in the modified tile is a structure characterized by both the removal of softer components comprising silica from the surface of the tile, increasing and exposing larger amounts of silica on the surface of the tile, and a tile with modified coefficient of friction characteristics. All three of these modifications to the structure of the tile distinguish the claims from Owens or Morrison.

The Examiner further rejects the claims under 35 U.S.C. § 103 over Saylor, Jr., U.S. Patent No. 5,787,655 in view of Morrison, U.S. Patent No. 4,745,032 and Brown, U.S. Patent No. 4,698,249. Applicants respectfully traverse the rejection.

The primary reference, Saylor, Jr. U.S. Patent No. 5,787,655, is directed to floor materials having a surface polymer layer having stone particulate imbedded in the polymer film. Such a structure is a stone particulate in a polymer matrix. The claimed structure is a silica or alumino silicate particulate in a clay matrix. Applicants' structure has a substantially different matrix than the Saylor, Jr. reference. One of ordinary skill in the art would not modify the Saylor, Jr. reference using a soft matrix comprising clay.

Neither the Morrison nor the Brown reference results in resolving the deficiencies or problems raised by the Saylor, Jr. reference. Brown shows tile structures that are made adaptable for installation in locations providing accessibility to conductors, piping and also providing

sound insulating properties. The multi-layer structure of the Brown tile has a surface quarry tile 10 layer on a multi-layer structure. Nothing in Brown teaches the modified surface structure. Any combination of Saylor, Jr. and Brown would still result in forming a stone particulate in a polymer matrix. Brown may provide a substrate for the polymer stone layer of Saylor, Jr.; however, one of ordinary skill in the art would not substitute a quarry tile layer for the polymer layer of Saylor, Jr. Accordingly, any combination of Brown and Saylor, Jr. does not teach the claimed invention. While the Morrison reference appears to teach a coating having certain proportions of silicon and aluminum oxide, and that coating can be used on tile, Morrison also does not teach any surface modification of the coating such that softer clay materials are removed from the surface resulting in a relative increase in the silica or alumino silicate property and a modification of the coefficient of friction properties. As a result, Morrison does not remedy the failure of Saylor, Jr. or Brown to show the claimed invention.

In paragraph 4 of the Office Action, the Examiner comments on the previous arguments. Applicants assert that the amendments to the claims to recite a specific structure for the claimed materials renders the Examiner's arguments moot, since the claims now recite a specifically modified quarry tile surface structure substantially different than that shown in Owens, Morrison, Saylor, Jr. and the other prior art documents.

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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Date



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